ABSTRACT

A propulsion system, including a diesel engine, an air inlet circuit, and an exhaust circuit, for exhaust gases coming from the engine. The inlet circuit includes an adjustment mechanism to control the air flow into the engine and the exhaust circuit includes a nitrogen oxides trap for storage of nitrogen oxides contained in the exhaust gases. During a regeneration mode in which the exhaust gases are provided with reducing agents for regeneration of the nitrogen oxides trap, a set point is determined for the air flow, according to the operating status of the engine, the adjustment mechanism is controlled to obtain an air flow close to the set point, a main fuel injection is carried out, and a secondary fuel injection is carried out during a power phase to maintain the exhaust gas in a reducing state.